In the Matter of

Recommendation of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks

EB- Docket 06-119

Comments of SquareLoop, Inc.

August 7, 2006

SquareLoop, Inc. is pleased to provide its comments to the FCC in the above referenced Notice of Proposed Rulemaking. SquareLoop provides a location-based services (LBS) software platform that enables dissemination of geographically targeted messages via existing and future wireless carrier networks. The SquareLoop platform is based on a technical approach that The MITRE Corporation originally developed for the United States Military. SquareLoop developed the Mobile Alert Network (MAN) to provide many of the capabilities the Independent Panel (IP) identified as important enhancements to the existing Emergency Alert System (EAS). As noted below, SquareLoop also can provide many other improvements to the existing EAS as well.

The Independent Panel addressed many issues relating to Hurricane Katrina's impact on communications networks and provided recommendations on how to prepare for future natural disasters. Many of those recommendations address how to keep communications networks operational or how to best to recover after natural disasters. SquareLoop's comments, however, will focus on those recommendations relating to sending emergency communications to the public.

Use of New Technologies to Send Emergency Alerts

The current EAS relies primarily on broadcast and cable systems to try to alert members of the public when there is an emergency. This is a very effective way of notifying people of large scale events such as hurricanes. As noted in the IP report, however, people are not always "tuned in" to a broadcast system, and many people not listening to these systems did not receive emergency alerts. Indeed, as the IP noted, *"a fairly large percentage of the population likely were uninformed."* Thus, any enhancement to the EAS that can reach people when they are not listening to TV or the radio will be an important improvement to government's ability to warn the public.

As noted in the IP report, at least one government used a landline telephone based communications system to send messages to over 21,000 phone numbers in advance of and after the hurricane struck. The St. Charles Parish Public School District was able to send information on conditions in the community in the storm's aftermath. This is a very effective way to reach members of the public with geographically targeted information. Unfortunately, those people who use only mobile phones or are not in their homes at the time of the call would not have been able to receive this information.

There are over 217 million mobile phones in service in the United States[1]. The ability to send emergency alerts to these phones will be an important enhancement to the existing EAS. This issue is the subject of a separate FCC rulemaking and SquareLoop has submitted information in that proceeding on how its technology could be used to enhance any system adopted. There are many challenges to deploying the technology to make this capability widely available, and SL has been working with the wireless industry and public safety officials to determine how best to participate in the EAS.

As part of that effort, SquareLoop recently conducted a trial of its system with the City of Manassas, Virginia. The trial involved approximately 30 people from the police and fire departments as well as the emergency management office and took place from February -April of this year. As noted at the conclusion of the trial:

"The Manassas Beta Test for the Mobile Alert Network (MAN) was a mutually beneficial exercise that pointed out numerous aspects of the system that would prove invaluable if the need arose to alert public safety and/or the public to hazards in and around the City of Manassas area. …It was proven that the MAN system had many valuable uses from imminent dangers alerts, preventing public and public safety alike from entering hazardous areas to first responder alerts to evacuation notices for the public. This will be the next tool of necessity for emergency management and will work hand in hand with (existing warning systems)." Tom Lusk, former Deputy Coordinator of Emergency Management and HazMat/Safety Officer, City of Manassas, Virginia.

SquareLoop is working with other federal, state, and local governments for further trials of the Mobile Alert Network technology with expectations that it would be deployed on a commercial basis in the fourth quarter of this year.

The Need for Geographically Targeted Messages

[1] The Cellular Telephone and Internet Association (CTIA). Aug 2006

While the impending approach of an event like a hurricane warrants a broad scale warning, sending more specific, geographically targeted information will almost always be more beneficial. As noted in the IP report, state and local official did not use the EAS to provide localized emergency evacuation notices and other information, which resulted in inconsistent or erroneous information being provided. An example given was that information regarding conditions in one portion of New Orleans did not necessarily depict conditions in other portions of the city. Any system that is reaching a large number of people, such as broadcast systems, will have this limitation unless it provides information targeted to specific areas. Of course, this requires more time to broadcast, and much of the information is irrelevant to the members of the public. For example, broadcasts of school closings where one may be affected by the decision of only one school, yet you may need to listen to information relating to many schools to get the relevant information. Thus, as noted by the IP, providing more localized information will be an important enhancement to the EAS.

There are many instances where sending geographically targeted messages to mobile devices would enhance the EAS. During the evacuation of New York City on September 11, 2001, broadcast stations were instructed people to evacuate to the north, which was fine for those people who were north of the World Trade Center. For those people who were to the south, however, this information moved them into harms way. While sending alerts to a broad area is helpful, the public will be better able to respond appropriately with information that is more targeted to one's individual location.

Ensuring that information received is geographically relevant helps to ensure people do not become subject to "alert fatigue". This is a problem with many existing warning systems that require people to sign up for alerts based on zip codes or other static boundaries. These systems often provide information that is not relevant to recipients because the defined area is either too large, or because it is not providing information based on where they actually are located. A good example of this is the Washington DC metropolitan area, where one potentially would need to subscribe to several systems if they lived, worked, and commuted through more than one governmental jurisdiction (e.g., the District of Columbia, and the various cities and counties within Virginia). Receiving alerts from each of these jurisdictions can lead to alert fatigue, and it does not ensure one will receive an alert based on their actual location should they be traveling outside of the areas for which they have subscribed to the alerting services.

Reaching Persons with Disabilities and Non-English Speaking Americans

Another recommendation of the panel is that the Commission determine how to send alerts to people with disabilities and to non-English speaking members of the public. As noted in the report, both those who are deaf or hard of hearing as well as those with visual impairments were not easily able to take advantage of either the broadcast or telephone based alerts. There were several efforts made to reach those people, but some of the shortcomings were identified in the report. SquareLoop believes that there is no one approach to sending alerts to everyone that will work in all instances (for example when Spanish speaking translators are evacuated), but the SquareLoop technology can be used to enhance the systems in place by providing another mobile phone based approach to solving this problem.

Most mobile devices sold today have the ability to display textual messages, and most discussions about the type of emergency alerts that would be sent to mobile devices have focused on use of text based messaging. This can be an effective means of reaching people who have hearing impairments. Also, as noted in the IP report, while there are devices that are used to send text based alerts to the hearing impaired, the fact that they are not battery operated created problems when the electricity failed. Since mobile devices are battery operated, this can be an important additional means of reaching those with this disability. Furthermore, SquareLoop's technology can be used to alter the vibrating cadence of the mobile device so that emergency alerts stand out from other messages that person would receive.

In addition to sending text messages, SquareLoop's technology can be used to send audio files to mobile devices, thus allowing emergency alerts to be heard by the blind or people with limited vision.

SquareLoop's platform can also be used to send messages in languages other than English. Since any short term plans to use mobile systems likely would involve having users opt-in for the alerts, subscribers could be given options as to which language they wanted to receive the messages. While this initially would involve selection during the opt-in process, as the SquareLoop technology becomes more widely deployed it could be performed at the handset level. While there are software language packages available, we would like to note that because of the importance of the wording of any emergency alert, we envision that any non-English language messages would be translated at the initiation stage by the governmental body sending the emergency alerts.

Additional Features

As mentioned above, there are additional features to the SquareLoop technology that we believe could be used to enhance any mobile based emergency alerting system. Because this is the subject of a separate proceeding, they are noted only briefly below. They do, however, tie into the recommendations of the IP as it relates to effectively warning members of the public, before, during and after emergency and disaster situations.

- Unique alert tones – It is important that messages containing emergency alerts be distinct from the many other messages received, which is a key component of the SquareLoop technology.
- Longer messages-Typical SMS based messages are limited in the number of characters that can be transmitted, which either limits the amount of information that can be sent or requires that multiple messages be used. SquareLoop's technology utilizes IP based transmission and therefore is not limited in the number of characters that can be sent.
- Time window-Messages have a time window when they can be valid and useful. People who are outside the targeted area but come within the area during the valid timeframe will still receive the message.
- Historical based messaging-This provides the ability to send a message to someone based on where they were in the past, such as if one has been exposed to an agent such as anthrax or the avian flu telling them of the risk of the exposure and encouraging them to seek medical attention. All this is done by the handset, and therefore the user's location information is not transmitted back to SquareLoop.
- Location privacy-As noted above, the SquareLoop technology runs on the handset, which determines whether it is within the geographic coordinates identified by emergency management authorities. Thus, the location of the end user remains private.

SquareLoop commends the IP and the FCC for addressing the many issues involved in ensuring Americans have access to important information in the event of emergencies and other disasters. There are many complex issues involved in ensuring that mobile systems can be used to provide emergency alerts, but the benefits to being able to reach over 200 million citizens with alerts that are geographically targeted, as well as providing the many other enhancement that can be achieved by the use of the most current technologies warrants the effort that will be required to make these capabilities a reality.

Respectfully Submitted,

/s/Thomas Stroup

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